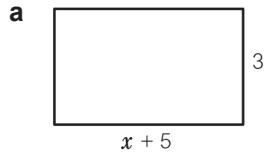
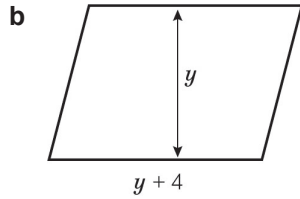


4.2 Expressions and brackets

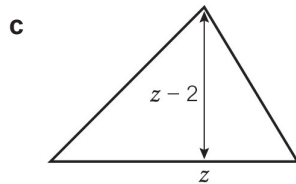
1 Write an expression for the area of each shape.



.....



.....



.....

2 Expand these expressions.

a $4(a + 3)$

.....

b $-4(a + 3)$

.....

c $-4(a - 3)$

.....

d $4(2a + 3)$

.....

e $-(x - 7)$

.....

f $-(-x - 7)$

.....

3 Expand and simplify these expressions.

a $8 - 2(a + 1)$

.....

b $15 - 4(b - 1)$

.....

c $4c - 5 - 3(c - 2)$

.....

4 Expand these expressions.

a $x(x + 5)$

.....

b $2x(x - 5)$

.....

c $2x(3x + 5)$

.....

d $-3x(2x - 4)$

.....

4.2 Expressions and brackets

1 Expand and simplify

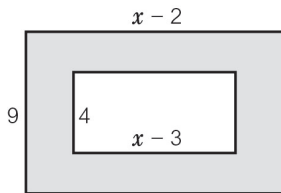
a $2(x + 7) + 3(x - 2)$

b $6(x - 7) - 2(x + 5)$

c $2(3y + 4) + 3(y - 2)$

d $5(6y - 1) - 4(3y - 2)$

2



- a Write an expression for the area of the larger rectangle.
- b Write an expression for the area of the smaller rectangle.
- c Write an expression for area of the shaded region.

3 For each shape

- i write an expression for the area of the shape
- ii expand the brackets in your expression.

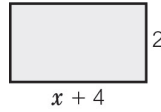


4 **Problem-solving** The length of one of the parallel sides of a trapezium is 5 more than the other parallel side. The perpendicular height is 7 cm. Write an expression for the area.

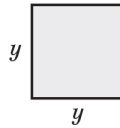
4.2 Expressions and brackets

1 Write an expression for the area of each shape.

a Area = length \times width = \times (..... +)
 = (..... +)
 = +



b Area = length \times width
 = \times
 =



2 Use grids to expand the brackets.

a $3(x + 4)$

	x	$+4$
3		

b $5(x - 3)$

	x	-3
5		

c $-3(x + 2)$

	x	$+2$
-3		

d $-4(x - 5)$

	x	-5
-4		

e $-3(2x + 5)$

	$2x$	$+5$
-3		

f $-5(4x - 3)$

	$3x$	-3
-5		